COASTAL IMPACT ASSISTANCE PROGRAM
Jefferson Parish Project Nominee Fact Sheet

Project Title: Tidal Restrictions at Barataria Bay Waterway, Harvey Cut and Little Lake

Entity/Individual nominating the project: Jefferson Parish, Louisiana

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Total CIAP Funds Requested: $ 11,000,000

Parish CIAP Funds Proposed: $ 0

State CIAP Funds Requested: $ 11,000,000

Infrastructure Funds Proposed: N/A

Description and Location of the Project: The project is sited in Jefferson Parish, on the portion of the Barataria Bay Waterway which is south of Bayou Dupont and north of Goose Bayou, and at the southern ends of Bayou Perot and Bayou Rigolettes, near their confluence, just northeast of Little Lake.

This project would restore hydrologic conditions at the critical Land Bridge area by restricting channel dimensions at Harvey Cut and at the Bayou Perot/Little Lake intersection. Additionally, four (4) sheetpile barriers would be strategically placed in the Barataria Bay Waterway as a means of reestablishing historic levels of hydrologic exchange within the area. This project would help protect the integrity of the shorelines of the Dupre Cut portion of the Barataria Bay Waterway. The project would also restrict channel dimensions to limit saltwater intrusion, tidal prism, and enhance freshwater retention.

Features would include a barrier wall structure with a 500 ft wide x 12 ft deep barge bay opening (to be optimized) would be constructed to constrict Bayou Perot to its historic 1956 opening; another barrier wall structure with a 56 ft wide x 12 ft deep barge bay opening would be constructed to constrict flows through Harvey Cut; and, construction of four (4) strategically-placed barrier wall structures across the Dupre Cut, with appropriately sized openings for marine transportation and barge traffic (125 ft wide x 12 ft deep barge bay openings, typical). These structures would be built so as to constrict the flows experienced in this area of the Barataria Bay Waterway. These barrier walls would consist of vertical pre-stressed concrete sheetpiles, approximately 6" thick x 8 feet wide x 20 LF long. These sheetpile slabs would be supported along each length by 60 foot long precast concrete piles having an “H”-Pile configuration for the top 20 feet, and driven at 8.5 ft, c.c. along the wall alignment. Along the edge of the channel, the barrier walls would be reinforced along each side with stone aggregate berms.

Project Type: Conservation, restoration and protection of coastal area, including wetland

Project Justification: The project is located in a rapidly deteriorating area of the Barataria Land Bridge. Due to bankline erosion, the historic openings which once allowed limited tidal exchange into with the freshwater and intermediate marshes north of the project, have been enlarged to such a degree that a catastrophic change in the basic hydrology of the wetlands is being experienced. Barriers, in the form of channel restriction, is proposed to

reestablish the historic levels of hydrologic exchange within the channels. The project will limit tidal inflows from Little Lake and Turtle Bay and enhance the retention of freshwater in the marshes north of the proposed structures.

Additionally, the historic width of the Dupre Cut portion of the Barataria Bay Waterway has enlarged to such a degree that a catastrophic change in the basic hydrology of the wetlands has occurred. These hydrologic changes have accelerated saltwater intrusion, increased the tidal prism, and reduced up-gradient freshwater and sediment retention. As a result, significant losses are occurring in adjacent wetland areas. Sheet pile barriers are proposed to limit the tidal and storm-driven forces of erosion and enhance freshwater retention in the adjacent marshes north of the proposed structures.

Restoration of original area-wide hydrology and increased retention of freshwater in marsh areas north of the project would help conserve these critical wetlands along the Barataria Land Bridge. During hurricane and extra-tropical storm events, the barrier walls constructed by this project will help to dampen and reduce storm surge amplitudes that may be experienced along the upper reaches of the Barataria Bay Waterway in the Lafitte and Bayou Villars areas of Jefferson Parish, and would protect oil and gas infrastructure within the direct vicinity.

The project is consistent with the following coastal restoration initiatives:

<u>COAST 2050: TOWARD A SUSTAINABLE COASTAL LOUISIANA</u>:

Coastwide Strategy:

Stabilization of major navigation channels
Maintain estuarine gradient to achieve diversity

Regional Strategy:

Restore natural drainage patterns

<u>COASTAL IMPACT ASSISTANCE PROGRAM (CIAP):</u>

Protect Critical infrastructure

Project Cost Share: State = 0 %
Parish = 0 %